

Title (en)
SINGLE PLATE PEM FUEL CELL

Title (de)
EINZELPLATTEN-PEM-BRENNSTOFFZELLE

Title (fr)
PILE À COMBUSTIBLE MEP À PLAQUE UNIQUE

Publication
EP 1920486 A4 20091021 (EN)

Application
EP 05772400 A 20050715

Priority
US 2005025325 W 20050715

Abstract (en)
[origin: WO2007011348A1] A fuel cell stack (32) includes a plurality of fuel cells in which each fuel cell is formed between a pair of conductive, porous, substantially hydrophilic plates (17) having oxidant reactant gas flow field channels (12-15) on a first surface and fuel reactant gas flow field channels (19, 19a) on a second surface opposite to the first surface, each ~f the plates being separated from a plate adjacent thereto by a unitized electrode assembly (20) including a cathode electrode (22), having a gas diffusion layer (GDL) an anode electrode (23) having a GDL with catalyst between each GDL and a membrane (21) disposed therebetween. Above the stack is a condenser (33) having tubes (34) that receive coolant air (39, 40) to condense water vapor out of oxidant exhaust in a chamber (43). Inter-cell wicking strips (26) receive condensate and conduct it along the length of the stack to all cells. In-cell wicking strips (1G, 1 ~a) on one or both surfaces conduct the water from the inter-cell wicking strips downwardly along the entire planform of each cell. Reactant air is provided to an air inlet manifold (47) through an air inlet conduit (48) from an air pump (49).

IPC 8 full level
H01M 8/04 (2006.01)

CPC (source: EP US)
H01M 8/026 (2013.01 - US); **H01M 8/04164** (2013.01 - EP US); **H01M 8/04171** (2013.01 - EP US); **H01M 8/241** (2013.01 - EP); **H01M 8/2484** (2016.02 - EP US); **H01M 2008/1095** (2013.01 - EP US); **Y02E 60/50** (2013.01 - EP)

Citation (search report)

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- See references of WO 2007011348A1

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